

CHAPTER II

ENVIRONMENTAL ETHIC AND WATER SOURCE CONSERVATION

A. Environmental Ethic

Etymologically, ethic come from the Greek word ethos (ta etha plural) which means "customs or habits. In this sense, ethics related to good living habits, the way of life, good in a person or society. These good living habits adopted and passed on from one generation to another.¹

Ethics more broadly understood as a guideline of how human beings should live, and act as a good person. Ethic is give guidance, orientation, and direction of how to live well as human beings.²

Environmental ethic is how humans should act or how human behavior is supposed to environment. Humans are one of the important components in the environment. This is related to human behavior in interaction with the environment is evidenced of human activity in the processing and taking natural sources in the environment. If this is not pushed with the full awareness that the environment is a critical component that must be preserved to support the future as a place of life of all living things, the environment will be damaged and appear problems that will lead to environmental disaster impact on living organisms in that environment. Environmental issues appear somewhere certainly can affect others in the surrounding environment. So that needs to be an awareness that is grown primarily in the form of environmental ethic to address various environmental issues and environmental sustainability.³

Humans are responsible as guardian of the earth. Many religious followers will not agree if the damage left the species continues, because all species are God's creation. When God created the world, then the species of God's

¹ A. Sonny Keraf, *Etika Lingkungan*, (Jakarta: PT Kompas Media Nusantara, 2002) p:2

² *Ibid.*, P: 3

³ Muh. Aris Marfai, *Pengantar Etika Lingkungan dan Kearifan Lokal*, (Yogyakarta: Gadjah Mada University Press, 2012) p:19

creation has a value. In religion and traditions of Islam, Christianity and Judaism clearly stated that as part of the faith, man is obliged to protect the species. Other religion, include Hinduism and Buddhism, very supports the preservation of living creatures other than humans.⁴

1. Anthropocentrism

Anthropocentrism is a theory of environmental ethics that sees humans as the center of the system of the universe. Humans and interests are considered the most decisive in terms of nature, either directly or indirectly. The highest value is human and interests. The only people who have value and attention as far as support and for the benefit of humans. Therefore, nature seen only as objects, tool and mean for the fulfillment of needs and interests humans. Nature is only a means for achieving human goals. Nature does not have value in itself.⁵

Anthropocentrism is also seen as a philosophical theory which says that the values and moral principles only apply to humans, and that humans have needs and interests of the highest value and the most important. For ethical anthropocentrism theory only applies to humans. This is about the need for human moral obligation of responsibility for others. Its mean, the obligation and moral responsibility of man on the environment, if that being it was solely in order to meet the interests of our fellow human beings. The obligation and moral responsibility towards fellow human beings, not a applications of moral obligation and responsibility of man against to nature itself.⁶

Understand the man himself about himself in dealing with nature will cause environmental damage. Humans understand themselves more powerful than other creatures in the environment. Humans have special

⁴ Mochamad Indrawan, Richard B. Primack, Jatna Supriatna, *Biologi Konservasi*, (Jakarta: Yayasan Obor Indonesia, 1998) p: 79

⁵ A. Sonny Keraf, *Etika Lingkungan*, p. 33

⁶ A. Sonny Keraf, *Etika Lingkungan*, p. 34

abilities, and the abilities that he feels entitled to arrange their environment to meet their needs.⁷

This ethical anthropocentrism causes humans to exploit and take care of the universe in order to meet the interests and necessities of life, without giving enough attention to the preservation of nature. Exploitative patterns of behavior, destructive and do not care the nature considered cause of in the perspective that only concerned with human interests. This perspective gave birth to the attitudes and behaviors that lead to greedy and greedy man took all the needs of nature without regard to sustainability, because nature is seen only for the sake of human interest. What are the doing of man toward nature so far as not to harm human interest, so far has no adverse impact on human interests. Human interest its mean here is more short-term nature. That is the root of a variety of environmental crisis.⁸

Many scientists were critical of the purely anthropocentric view. They thought network broader life and they appreciate being two others for themselves, not just their benefit for us.⁹

According to Murdy, each species has value in itself. Human beings always behave as if human survival is far more important and valuable than the survival of other living creatures. Since human survival depends on the survival of other living beings in the universe, human beings have an interest to save the universe and everything in it. Therefore, "so that we can survive as individuals and as a species, we must choose to take actions that will support our life system 'we'.¹⁰

⁷ Antonius Atosokhi Gea, *Relasi Dengan Dunia*, (Jakarta: PT Elex Media Komputindo, 2005) p: 85

⁸ *Ibid.*, p: 33-35

⁹ Audrey R. Chapman, Rodny L. Petersen, Barbara Smith-Moran, *Bumi yang Terdesak*, translate: Dian Basuki and Gunawan Admiranto, (Bandung: PT mizan pustaka, 2000) p. 51

¹⁰ A. Sonny Keraf, *Etika Lingkungan*, p. 38

So which one is the application of anthropocentrism is wrong by just seeing the superiority of man's position as the ruling that he should use the universe and everything in it is arbitrary and regardless of the next result.¹¹

2. Biocentrism

Biocentrism paradigm, this theory considers every life and living creatures have value and worth to itself. This theory of life and take seriously every living thing in the universe. All living things value in itself that deserves consideration and moral concerns. Nature needs to be treated morally, regardless of whether it is worth to humans or not. This is an approach to axiology. This approach has the spirit of that nature has its own value and the human need to save and protect the value of each component present in nature.¹²

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According to Paul Talor, biocentrism based on four convictions.¹⁴

- a. The belief that man is a member of the community of life on earth in the same sense and in the same framework in which other creatures are also member of the same community.
- b. The belief that the human species, along with other species, is part of an interdependent system such that the survival of any living beings, as well as the chance to breed or otherwise, is not determined by the physical conditions of the environment but by their relationships to one another.
- c. The belief that all organisms is the center of life that has its own purpose.
- d. The belief that humans are inherently superior to other living beings.

¹¹ A. Sonny Keraf, *Etika Lingkungan*, p. 48

¹² A. Sonny Keraf, *Etika Lingkungan*, p. 36

¹³ Muh. Aris Marfai, *Pengantar Etika Lingkungan dan Kearifan Lokal*, p: 24

¹⁴ A. Sonny Keraf, *Etika Lingkungan* , p:38

3. Ecocentrism

The theory is a continuation biocentrism ecocentrism. Biosentrisme just focus on life ethics entirely, while ecocentrism ethics focus on the entire ecological community, whether living or not. Ecologically, creatures and objects other abiotic intertwined with each other. Obligation and moral responsibility the same applies to all the ecological reality.¹⁵

One version of this Ecocentrism theory is a theory of environmental ethics is now popularly known as Deep Ecology. DE requires a new ethic that is not human-centered, but centered on living things entirely in line with efforts to tackle environmental problems. This new ethic does not change at all the relationship between man and man. The new one is, the first, human beings and their interests are no longer a measure for everything else. DE focuses on the whole biosphere. DE not only focuses on short-term interests, but the long-term¹⁶

Spirituality in *deep ecology* gives emphasis on linkages with something larger and larger universe than humans. Spirituality is a great inspiration to the sustainability of the management of the ecological crisis. When beliefs, ideas, ideas, ideals and values integrated into one in the mindset and patterns of human acts in manage nature and the environment, then it is referred to as *deep ecology*.¹⁷

B. Environmental Ethic Toward Islam

1. Humans and The Cosmic Duty

According to Islam, man is God's creation the best and most special. God Himself gives to man the respect and favors over his creation to another. The Qur'an states this clearly:

وَلَقَدْ كَرَّمْنَا بَنِي آدَمَ وَحَمَلْنَاهُمْ فِي الْبَرِّ وَالْبَحْرِ وَرَزَقْنَاهُمْ مِنْ

¹⁵ A. Sonny Keraf, *Etika Lingkungan*, p. 75

¹⁶ A. Sonny Keraf, *Etika Lingkungan*, p. 78

¹⁷ Muh. Aris Marfai, *Pengantar Etika Lingkungan dan Kearifan Lokal*, p. 28

﴿٧٠﴾ الطَّيِّبَاتِ وَفَضَّلْنَاهُمْ عَلَىٰ كَثِيرٍ مِّمَّنْ خَلَقْنَا تَفْضِيلًا

Indeed, we have honored the children of Adam, we carried them on land and sea, we give them good luck than good and we really favor them over many Us. (Q.S. Al-Isra ': 70)¹⁸

Nature created by God in a truly vast with a wide range of this kind are mandated to care by humans because only humans, among the creatures of God who has the ability manage world, charged to the responsible people to maintain it.¹⁹ As Caliph, God gave him the freedom to manage nature has designed with all the potential and availability of materials necessary for life until the doomsday. The other side, the freedom always means a responsibility. On this basis humans are also responsible for the vegetable and animal life. Strictly speaking humans have the duty and responsibility of the cosmic.²⁰

In his role as caliph, man must take care of, utilize and maintain, either directly or indirectly, the mandate covers the earth and everything in it, such as mountains, sea, water, clouds and wind, plants, rivers, animals, thus humans can have good behavior. Clean life style is an important part of human life to protecting the environment, particularly water and do deeds that cause damage and inconvenience to the environment.²¹

Nature is Allah's Safekeeping. In a number of verses of the Qur'an, God states that the entire universe belongs to Him (Qur'an Surah Al-Baqoroh, 2: 284). Those are socio-economic principles in Islam. Humans were given permission to stay in it for a while in order to meet the goals that have been planned and set God (Surah al-Ahqof, 46: 3). That way

¹⁸ Fachruddin M. Mangunjaya, Husain Heriyanto, Reza Gholami, *Menanam Sebelum Kiamat*, (Jakarta: Yayasan Obor Indonesia, 2007) P. 3

¹⁹ Departemen agama RI, *Pelestarian Lingkungan Hidup*, (Jakarta: Lajnah Pentashihan Mushaf Al-Qur'an, 2009) p. 27

²⁰ Fachruddin M. Mangunjaya, Husain Heriyanto, Reza Gholami, *Menanam Sebelum Kiamat*, P.4

²¹ Departemen agama RI, *Pelestarian Lingkungan Hidup*, p.27

does not belong to the essential nature of man. Ownership of man is only a mandate, a deposit or a loan which in turn must be returned in its original condition. Even good men will only refund the deposit in a better state than when he received it. The Prophet said: "The best of you is the best in restoring debt". Refundable deposit is which will then be distributed back to the person or generation thereafter until the end of the age of the universe.²²

The Creation of Nature was not in Vain. God created all creatures no benefit. The entire creation is a gift of God, including natural. In the Qur'an states that God created the universe is not aimless, futile or playful. A Quran states clearly: "Verily in the creation of the heavens and the earth and the alternation of night and day there are signs (the greatness of God) for people who think. Those who remember Allah, standing, sitting and lying on their sides to think about the creation of the heavens and the earth (saying): "Our Lord, are not you create all this in vain; protect us from the punishment of hell "(Q.S. Ali Imron: 190-191)

2. Nature for Future Generation

Islam requires the man to investigate and understand the patterns of God in nature. Then it becomes the duty of man to take care of nature, either as parks, forests, rivers and others. Islam also requires humans to turn on lands that are not productive (Ihya al amwat) with planted trees or plants, not just for the sake of today but also for future generations. This demand is not only for each individual today but applies all time. A hadith of the Prophet states; "If the time comes doomsday, while yours is still no date palm seed, then plant immediately". (HR. Ahmad).²³

Humans can take lessons and benefits from the existence of other beings. Therefore, compliance and ethics on the creatures and even then must be enforced anyway. Utilization of natural resources that have been

²² Fachruddin M. Mangunjaya, Husain Heriyanto, Reza Gholami, *Menanam Sebelum Kiamat*, P.4

²³ Fachruddin M. Mangunjaya, Husain Heriyanto, Reza Gholami, *Menanam Sebelum Kiamat*, p.7

available appropriately managed wisely all the needs of mankind and do not use excessive manner which can eventually cause damage and disaster. People sometimes make mistakes in managing the earth, their exploitation by the will and lust for gain as much as possible. Man does not have knowledge about the ecosystem and that one looked good deeds without knowledge.²⁴ As mentioned in the following verse:

بَلِ اتَّبَعَ الَّذِينَ ظَلَمُوا أَهْوَاءَهُمْ بِغَيْرِ عِلْمٍ فَمَنْ يَهْدِي مَنْ
أَضَلَّ اللَّهُ وَمَا لَهُمْ مِنْ نَاصِرِينَ ﴿٢٩﴾

But people who do wrong follow their lusts without knowledge, then who will may guide people who have been misled God? There is not a helper for them. (Q.S ar-Rum: 29)

Sign of the Qur'an related to the need for environmental protection include the following:

a. The damage that appear in the earth:

ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ لِيُذِ
يَقَهُمُ الَّذِي بَعَضَ عَمَلُهُمْ لَعَلَّهُمْ يَرْجِعُونَ ﴿٤١﴾

Corruption has appeared on land and sea because of what the hands of humans. God wants them to feel part of (due to) their actions, so that they come back (to the straight path). (Q.s. ar-Rum: 41)

b. Man to suggested have *ibrah* reason, Allah says in his book:

قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ كَانَ عَاقِبَةُ الَّذِينَ مِنْ قَبْلُ
كَانَ أَكْثَرُهُمْ مُشْرِكِينَ ﴿٤٢﴾

Say (Muhammad), " Let's go on earth and see how was the end of the first. Most of them are people who associate (God). (Q.s. ar-Rum: 42)

c. No *israf*/ redundant, as Allah says:

²⁴ Fachruddin M. Mangunjaya, *Konservasi Alam dan Islam*, (Jakarta: Yayasan Obor Indonesia, 2005) p.17

يَبْنَیْ ءَادَمَ خُذُوا زِينَتَكُمْ عِنْدَ كُلِّ مَسْجِدٍ وَكُلُوا وَاشْرَبُوا

وَلَا تُسْرِفُوا ۚ إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ ﴿٣١﴾

O Children of Adam! Wear nice clothes at all (enter) mosque, eat and drink, but do not overdo it. Allah loves those who exaggerated. (Q.S. Al-A'raf: 31).

Life where that damages the environment this is because of human excessive in his life.

d. Not *itraf* (luxury of)

وَإِذَا أَرَدْنَا أَنْ نُهْلِكَ قَرْيَةً أَمَرْنَا مُتْرَفِيهَا فَفَسَقُوا فِيهَا فَحَقَّ عَلَيْهَا

الْقَوْلُ فَدَمَّرْنَاهَا تَدْمِيرًا ﴿١٦﴾

And when We wish to destroy a country, then we tell the people who live in luxury in the land (to obey Allah), but if they do iniquity on (in) the land, then it is appropriate to them words (our punishment), then we destroyed altogether (the country). (Qs. Al-Isra ': 16)

Sharia is the nature in which the earth can only be governed by the Sharia sciences. If something violates nature, then the result would be a fatality. The tendency of humans with super ego have tend not to recognize the truth of the divine provision has obviously had participated in as a framework so that the whole nature of man and not fall astray way of thinking and acting that lead to destruction. Humans are inclined arrogant when remember it denied without the knowledge of the divine.²⁵ As Allah says the following:

وَلَوْ اتَّبَعَ الْحَقُّ أَهْوَاءَهُمْ لَفَسَدَتِ السَّمَوَاتُ وَالْأَرْضُ وَمَنْ

فِيهِنَّ ۚ بَلْ أَتَيْنَهُمْ بِذِكْرِهِمْ فَهُمْ عَنْ ذِكْرِهِمْ مُعْرِضُونَ

In the event that the truth follow their own lusts shall perish undoubtedly the heavens and the earth and what is between them." (Q.S. al-Muminun: 71)

²⁵ *Ibid.*, p.17

e. No *tabzir* (futile)

إِنَّ الْمُبَذِّرِينَ كَانُوا إِخْوَانَ الشَّيْطَانِ ۗ وَكَانَ الشَّيْطَانُ لِرَبِّهِ

كُفُورًا

Indeed, those who spender it is brother devil and Satan was very dissenter to his Lord. (Q.S. al-Isra ': 27)

Benefit general (*al-istishlah*) is a necessary condition in consideration of environmental preservation. Islamic vision is given to improve the business environment, including human life. The interest is not only for today but also for the future even centuries later. God provides natural and harmonious contents in line with the balance of the ecosystem that has been going on scientifically.

C. Water conservation

Water conservation is the maintenance of water resources. According to the Law of the Republic of Indonesia Number 7 of 2004 on Water Resources, water conservation is an effort to maintain the existence and continuity of the state, properties, and functions of water resources in order to be available in sufficient quantity and quality to meet the needs of living things, both in time now or in the future (Chapter 1 General Provisions, Article 18 of Law No. 7 of 2004 on Water Resources). In the first paragraph of Article 24 of Law on Water Resources stated that the maintenance of the water resources is an activity to treat a source of water and water resources infrastructure that aims to ensure the preservation of water resources and water resources infrastructure.²⁶

Water conservation is an urgent requirement and the responsibility of all parties, both government and society. It is based on the scientific fact that the amount of water on earth is fixed, but if it is not maintained good water management, there will be water shortages in the dry season and

²⁶ Departement Agama RI, *pelestarian lingkungan hidup*, p. 131

the excess water in the rainy season as the water cycle becomes unbalanced.²⁷

Humans need to be aware of its social responsibility for water conservation by contributing ideas, awareness, community education and is involved in various activities in order to take care of water resources and water resources infrastructure is intended to guarantee the preservation of water resources and water resources infrastructure.²⁸

1. Water Conservation Goal

- a. The balance, namely to ensure the availability for future generations, the reduction of water from an ecosystem will not pass through the reimbursement of it balance, namely to ensure the availability for future generations, the reduction of water from an ecosystem will not pass through it natural replacement value.
- b. Energy savings, the water pumping, delivery, and wastewater treatment facilities consume substantial energy. It occurs in several areas of the world, such as California.
- c. Habitat conservation, the use of water by humans is minimized deposits to help secure a clean water source for local wildlife habitat and migration revenues streams, including new business development of reservoirs and other water-based infrastructure (maintenance of old ones).²⁹

2. The Pillars of Water Conservation

Jihad to carry out water resources must be implemented on top of the three pillars of a solid support.³⁰

- a. Political pillars. Water conservation should be the awareness and responsibility of the government.

²⁷ *Ibid.*, p. 132

²⁸ *Ibid.*, p. 135

²⁹ Anis Hanafi, "Konservasi Air dengan Menggunakan Biopori", <http://anishanafia.blogspot.com/2009/05/konservasi-air-dengan-menggunakan.html>, P.2

³⁰ Departemen Agama RI, *Pelestarian lingkungan hidup*, p. 142-145

- b. Education Pillars. Jihad to preserve water resources for human survival and the other God's creatures should be the people's consciousness and struggle. That is the family education, school and community.
- c. Cultural pillars. The public should be revived to preserve water resources to foster the values of local wisdom.

3. The Important Characteristic of Water

a. Physical characteristic

The water in this world has three different forms, namely solid as ice, liquid as water, and gases as water vapor. Forms which will be obtained depend on local weather conditions. While some of the most important physical characteristics that affect the water quality is overall a solid material (both floating and dissolved), turbidity, color, odor and taste, temperature or temperature.³¹

b. Chemical characteristic

Rain or new fallen snow is relatively pure. When the water reaches the earth's surface and then drain and seep into the soil so the water dissolves and carries materials soluble than places in its path. The content of the chemicals in the water affect the water using suitable. In general, the chemical characteristics of water include pH, alkalinity, dissolved cations and anions, and hardness. Some of these characteristics can be described more clearly³².

³¹ Juli Soemerat Slamet, *Kesehatan Lingkungan* p.43

³²pH: measure of acidity and alkalinity properties of water, expressed as pH value is defined as the logarithm of the hydrogen ion concentration in moles every liter. In this case the pH of pure water is 7. Water with a pH above 7 is acidic, whereas if less than 7 is alkaline; (b) alkalinity: most of the water is alkaline because of alkaline salts are very common in the soil. Impurities the water is due to the presence of carbonates and bicarbonates of calcium, sodium, and magnesium. Alkalinity expressed in mg / liter of equivalent calcium carbonate. The acidity of the water is caused by the presence of CO₂ in the water. It is measured by the amount of calcium carbonate required to neutralize the carbonic acid and expressed in mg / l; (c) hardness: water hardness is very important in the provision of clean water. Water with high hardness requires more

Water is a universal solvent, almost all types of substances soluble in water. Water is also a biological fluid, obtained in the body of all organisms. Thus, chemical species that is in the water in vast numbers.³³

c. Biological Characteristic

Life is said to be derived from the water (sea). In the waters of life are always obtained, flora fauna. The object of life is a reciprocal effect on water quality. In an aquatic environment, there are a variety of living things peculiar to the living environment in that waters. Therefore thing divided into organisms that are not native and native to the environment. Native organisms in water bodies are usually not pathogenic organism that is not native to human. Organism may come from sewage, rain water, dust and other impurities. These organisms can live in waters containing nutrients or food to him. As with all organisms, every organism species in the waters has a very special function in the environment and form a distinctive ecosystem aquatic anyway.³⁴

4. Hydrology Circle

The water cycle according to the Qur'an is:

وَهُوَ الَّذِي يُرْسِلُ الرِّيحَ بُشْرًا بَيْنَ يَدَيْ رَحْمَتِهِ ۗ
ثَقَالًا حَتَّىٰ إِذَا أَقَلَّتْ سَحَابًا سُقْنَهُ لِبَلَدٍ مَّيِّتٍ فَأَنْزَلْنَا
بِهِ الْمَاءَ فَأَخْرَجْنَا بِهِ ۖ مِنْ كُلِّ الثَّمَرَاتِ ۗ كَذَٰلِكَ
نُخْرِجُ الْمَوْتَىٰ لَعَلَّكُمْ تَذَكَّرُونَ ﴿٢٧﴾

soap before formed foam. Temporary water hardness is a result of calcium and magnesium bicarbonate. It can be removed by boiling and add the lime in the water. While permanent water hardness is due to calcium and magnesium sulfate, chloride, and nitrate. Water hardness is expressed in mg / l by weight of calcium carbonate. Juli Soemerat Slamet, *Kesehatan Lingkungan*, p. 150.

³³ Juli Soumirat Slamet, *Kesehatan Lingkungan*, p. 83

³⁴ Juli Soemerat Slamet, *Kesehatan Lingkungan*, p. 44

And it is He who sends the in as heralds of gal tidings, going before His Mercy (rain). Till when they have carried a heavy-laden cloud We drive it to a land that is dead, then We cause water (rain) to descend thereon. Then We produce every kind of fruit therewith. Similarly, we shall raise up the dead. So that you may remember or take heed. (Q.S. Al-A'rof: 57)

Water cycle according to the paragraph above, occurs in three phases involving *ar-riyah* (wind), *sahib* (cloud), *rahmatih* (His love, the rain)

a. The first phase (wind).

Humans inhabited the Earth is covered by a layer of the atmosphere or the air. While the wind is moving air due that the difference of air pressure. Wind is air moving from areas with a low temperature to a high temperature region. Wind occurs because of warming ocean water by sunlight. Heat from the sun is what raises the air pressure so that it moves into wind that bring moisture gathered and herded up into the rain as depicted in. Surah an-naba ': 13-14, which means:

*And we make a bright light (sun). And we send down from the clouds rain water gushing into tears.*³⁵

b. Second phase (cloud)

In paragraph Qs.an-naba ': 13-14 God calls the sun with the term *sirajaw wahhaja* (very bright light). Naming is amazing anyone who read the Qur'an and connected with scientific facts which confirm that the hot sun and heat surface achieve 6000 degrees at its center reaches 30 million degrees, which produces energy in the form of ultraviolet 9%, 46% light. Thus the sun is called as a very bright light because it contains light and heat at the same time that is needed by the Earth's atmosphere, resulting in a harmony between the light of the sun with the atmosphere, the air

³⁵ Juli Soemerat Slamet, *Kesehatan Lingkungan*, p.115

layer of earth. Light and heat are what caused the air pressure so that air is moving into a wind that carries and lead water vapor gathered up into a wind that bring moisture gathered and herded up into the clouds that rained down later.³⁶ Q.S. Al-Hijr: 22:

And We send the winds fertilizing (to fill heavily the clouds with water), then cause the water (rain) to descend from the sky, and We give it to you to drink, and it is not you who are the owners of its stores (i.e. to give water to whom you like or to withhold it from whom you like).

As for the meaning of the above verse is that God breathed the wind to marry the air bubbles that have been mixed with the particles with water vapor. It is scientifically explained that "at the ocean surface to form bubbles of air bubbles are countless. At the time these bubbles burst, thousands of tiny particles called aerosols with a diameter of one hundredth of a millimeter into the air; mix with dust carried from the land by the wind into the upper atmosphere. These particles are carried up to the top again by winds higher up contact with water vapor. Water vapor condenses around these particles brought up on higher wind- up contact with water vapor. Water vapor condenses around these particles turned into water droplets, then these water droplets and forms clouds which gathered more weight, then fall to earth as rain."³⁷

c. Third phase (rain)

In many verses of the Qur'an mentioned *wa anzala minas - sama'i Ma'an* (and he, Allah, sends down water from the sky). According to Muhammad Ali as- Sabuni intended with water in the verse is "fresh rain water and contains minerals derived from the cloud of God through His power".³⁸

³⁶Juli Soemerat Slamet, *Kesehatan Lingkungan*, p. 116

³⁷Juli Soemerat Slamet, *Kesehatan Lingkungan*, p.117

³⁸Juli Soemerat Slamet, *Kesehatan Lingkungan*, p. 118

As for the term (*al- sama '*) the source of rain water, according to al -Asfahani is high. According to him, the sky all the objects is the highest part of the object so simply rain water that fell from a high place. In the meantime, the scholars of *tafsir* understand the term (*al- sama '*) , where it is high (*as- sahab*) , the cloud , as they may be visible cloud moved across the sky ³⁹

5. Various sources of water

- a. The surface water including rivers water and lakes.
- b. Groundwater depth-dependent that could be called shallow or deep groundwater.
- c. Air space water that's water which comes from the atmosphere, such as rain and snow.⁴⁰

D. Water and Human Needs

Everything is alive, human, animal, in the earth made by God out of water, as Q.S. Al Ambiya ': 30

Have not those who disbelieve known that the heavens and the earth were joined together as one united piece, then We parted them? And We have made from water every living thing. Will they not believe?

Some commentators tend to come from the understanding that the process originated from water. They refer to the biologists who say that protoplasm is the original basis of living matter.⁴¹

Water is a substance that is needed in the life of every living creature. None of the living creatures on earth that does not require water. For humans, 65-75% of adult body weight is in the form of water human. Everyone needs 2.5 liters of drinking water a 3 liter per day including water in food. Humans can survive 2-3 weeks if without food, but only can survive 2-3 days if no drinking. In general,

³⁹ Juli Soemerat Slamet, *Kesehatan Lingkungan*, p. 119

⁴⁰ Juli Soemerat Slamet, *Kesehatan Lingkungan*, p. 82

⁴¹ Agus S. Djamil, *Al-Qur'an dan Lautan*, Bandung, PT Mizan Pustaka, 2005, p: 549

the quantity of natural resources of water equal to the natural resources of land. That is relatively fixed. However, the quantity of each moment is always decreasing. The quantity of water on Earth is very abundant, but mostly in the form of salt water in the ocean. Of the approximately 1,386 million km³ of water that is in the earth, approximately 1,337 million km³ or 97.25% were at sea and just 35 million km³ or 2.53% in the form of fresh water on the mainland, while the remaining gaseous or vapor.⁴²

The amount of fresh water is mostly 69% in the form of lumps of ice, snow, and glaciers are found in rivers, lakes, and reservoirs. Most of the fresh water used for irrigation area which covers an estimated 210 million hectares of which are scattered throughout the world. Along with the growth in world population, the demand for water will continue to grow as demand for land (land), whereas the amount of water and land is fixed. Human need for water resources becomes very apparent when associated with population growth, food security and industrialization.

Water is one of the natural resources is beginning to feel its effect on efforts to expand agricultural and industrial activities in various places around the world. Lack of water in agriculture led to inhibition of plant growth.⁴³

For human drinking water is one of the main requirements. Humans use water for various purposes such as bathing, washing, toilet, food production, housing, and clothes. Remember that many diseases can be carried by water to humans when people use it, the main purpose of water supply / net for the community is to prevent congenital disease water. Thus it is expected that more and more

⁴² Samadi S.Pd, M.Si, *Geografi 2*, (Yogyakarta: Yudhistira, 2007) p. 70

⁴³ *Ibid.*, p. 1

coverage of the community with clean water, dwindling morbidity of this water-borne diseases.⁴⁴

Water quality can change based on the information received. Good quality water will form beautiful hexagonal crystals. It can be very aesthetically if the water is frozen and then see it in the microscope. If water is collecting the information and the crystals reflect the letters that exist on such information, making any water quality may change depending on the information obtained. In other words, the information that we give to the water will change the quality of water. In this case, said Masaru Emoto "I imagine how people would feel happy if the drinking water of good quality"⁴⁵

By giving attention to an object, then we give energy to the object. For example, if you talk to the plants when watering, plants will grow faster and produce more flowers were beautiful. By receiving attention, life will get energy to be better.⁴⁶

If water wants to show a sense of excitement, the crystals will break out like a flower. Conversely, if the water is shown negative words, it will not form crystals. Water quality may be better or worse depends on the information that we receive because 70 percent of the adult human body is water.⁴⁷

The role of water is vital to most living things on earth, including the human. It is often said that people are able to withstand hunger two to three days. But people will be doomed when thirsty or dehydrated body.⁴⁸

⁴⁴ Juli Soemerat Slamet, *Kesehatan Lingkungan*, (Yogyakarta: Gadjah Mada University Press, 2002) p. 108

⁴⁵ Masaru Emoto, *The True Power of Water*, Translate: Azam, (Bandung: MQ Publishing, 2006) P. 14

⁴⁶ *Ibid*, p. 111

⁴⁷ *Ibid*, p. 17

⁴⁸ Ed. P. Cahonar and Irwan Suhanda, *Makan Sehat Hidup Sehat*, (Jakarta: PT Kompas Media Nusantara, 2006) p. 122

Water quality greatly affects health. Water can bring both positive and negative information. Because we are the water, it is definitely our bodies will respond to the information carried by the water we drink. If we get positive information out of the water, your body will be healthier. Conversely, if we get negative information, it is likely we will get sick.⁴⁹

On the concept of human formation, the fertilized egg 96% of its water. After the birth of an infant of 80% is water. The more evolved human body water percentage decreases and persists until the limit of 70% to human when reaching adulthood. In other world is as long as we live as water. So in fact the man is water. Water also plays an important role when we die. Said Masaru Emoto, in Japan we have a habit of giving water to people who have died by wearing a cotton ball or leaves pohion Shikimi, we wet the lips of the deceased may be alive. This habitual is based on the understanding that water is the source of life.⁵⁰

E. Water in the repertoire of religion

Water is sensitive. He will respond to every word we say. If we send a good *Hado* to the water by saying positive words, water will present beautiful crystals. Prayer also released energy that can alter water quality. By providing water to the prayer, meaning we send *Hado* to water, and water then use its power to answer prayers.⁵¹

The necessary expertise to do this, pray to change the quality of water. We can send *Hado* stronger if we say a prayer in the form fitting tense in the form of the future tense. Say a prayer in the form of past tense, our mind and heart will be stronger.⁵²

⁴⁹ Masaru Emoto, *The True Power of Water*, p. 84

⁵⁰ Masaru Emoto, *The True Power of Water*, p. 18

⁵¹ Masaru Emoto, *The True Power of Water*, P. 113

⁵² Masaru Emoto, *The True Power of Water*, p. 114

In Islam, water is also typically used in the prayers, the reading of the Qur'an forums, to cure diseases etc. The trick is to read certain prayers then blown into the water.

According to the experience of Masaru Emoto, saying the words would help *Hado* stronger than writing words. Prayer is commonly used in a religion, has a strong energy *Hado*. If we live our religion well and pray without any doubt, we will be blessed with a very strong force.⁵³

Services christening baby in the Catholic Church, the priest sprinkled with baptismal water babies three times in the name of the Father, son and Holy Spirit, before making the sign of the cross on his forehead. Being in the Orthodox church and the priest blessed the water before smearing baby breathed on it with the oil of joy. Infants who were laid bare in a container of water baptism, faced on east and dipped in water up to three times.⁵⁴

The priest approached the coffin at the church door, with splashed holy water, by uttering the words taken from the Gospel of John⁵⁵ In addition there are many other religions that use water in certain rituals.

⁵³ Masaru Emoto, *The True Power of Water*, p. 115

⁵⁴ Michael Keene, *Agama-Agama Di Dunia*, terj. F.a Soeprapto, , (Yogyakarta: Penerbit Kanisius /Anggota Ikapi, 2006) P. 109

⁵⁵ *Ibid*, p. 110